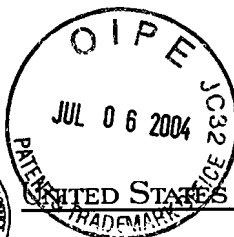


IFW



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/803,040	03/18/2004	Deborah L. MacPherson	

000041426
 DEBORAH L. MACPHERSON
 118 DOGWOOD STREET
 VIENNA, VA 22180

CONFIRMATION NO. 6549

FORMALITIES LETTER



OC000000012831576

07/09/2004 MBLAND 00000002 10803040

Date Mailed: 06/02/2004

01 FC:2051

65.00 DP

NOTICE TO FILE CORRECTED APPLICATION PAPERS

07/09/2004 MBLAND 00000002 10803040

Filing Date Granted

02 FC:1460

130.00 DP

An application number and filing date have been accorded to this application. The application is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given TWO MONTHS from the date of this Notice within which to correct the informalities indicated below. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

The required item(s) identified below must be timely submitted to avoid abandonment:

- A substitute specification in compliance with 37 CFR 1.52, 1.121(b)(3), and 1.125, is required. The specification, claims, or abstract page(s) submitted is not acceptable and cannot be scanned or properly stored because:
 - The specification contains drawings or flow diagrams (37 CFR 1.58(a)) on page(s) 47. Drawings or flow diagrams cannot be embedded in the specification and should be submitted separately in accordance with 37 CFR 1.84. (Both a substitute specification and substitute drawings are required).
- Replacement drawings in compliance with 37 CFR 1.84 and 37 CFR 1.121 are required. The drawings submitted are not acceptable because:
 - The drawings submitted to the Office are not electronically reproducible. Drawing sheets must be submitted on paper, which is flexible, strong, white, smooth, non-shiny, and durable (see 37 CFR 1.84(e)). See Figure(s) 9, 10A, & 10B.
- A replacement abstract commencing on a separate sheet in compliance with 37 CFR 1.72(b) and 37 CFR 1.121 is required.

Replies should be mailed to: Mail Stop Missing Parts
 Commissioner for Patents
 P.O. Box 1450
 Alexandria VA 22313-1450

A copy of this notice MUST be returned with the reply.

M. Melendy
Customer Service Center

Initial Patent Examination Division (703) 308-1202

PART 1 - ATTORNEY/APPLICANT COPY

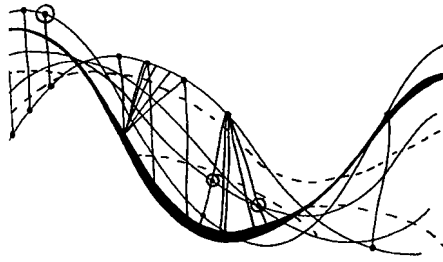


Figure 10C/ Front Page Drawing

TRANSMITTAL July 1, 2004

To: The United States Patent and Trademark Office (USPTO), Commissioner for Patents
From the Inventor: Deborah L. MacPherson, Vienna VA
U.S. Application Number: 10/803,040; Filing Date: 03/18/2004
Title of the Invention: Context Driven Topologies
Preliminary Classification: 706; Initial Art Unit: 2121; Confirmation Number: 6549

RE: Notice to File Corrected Application Papers

Sent to: Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Via: U.S. Postal Service Certified Mail 7003 1010 0002 0787 8204

Per USPTO correspondence received 06/03/02 and referenced above, the following items are enclosed:

- (1 of 7) Copy of the Notice
- (2 of 7) Substitute Specification including revised page numbers; printing on flexible, strong, smooth, non-shiny, durable, white paper; and digital files on CD. Please notify the inventor if the electronic files should be sent to an .ftp. See the "Substitute Specification" cover letter for details.
- (3 of 7) Higher resolution drawings as prints and scans. See the "Drawings" cover letter for a brief explanation of the drawing concepts and notes on the drawing originals versus the files.
- (4 of 7) Three copies of a Black and White Photograph with permissions provided by the Smithsonian Institution Hirshhorn Museum and Sculpture Garden, \$130 fee per 37 CFR 1.17(i).
- (5 of 7) Petition to the Examining Officer to: capitalize all words of the invention title; request for a meeting to discuss classification; integration of an embedded image and the drawings within the text; acknowledgement of the renumbered pages and drawings; request to try using a prototype of this invention to map, interpret, and archive the USPTO collections.
- (6 of 7) Notarized Supplemental Oath, \$65 fee per 37 C.F.R. 1.16(e).
- (7 of 7) A postage paid card addressed to the inventor to acknowledge receipt of these documents.



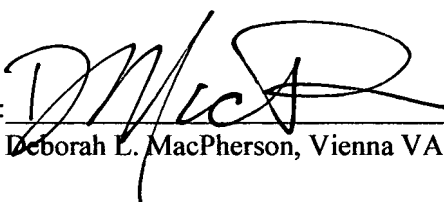
U.S. Application Number: 10/803,040
Filing Date: 03/18/2004
Inventor: Deborah L. MacPherson
118 Dogwood St, Vienna VA 22180
Phones 703 242 9411 and 703 585 8924
Title of Invention: **Context Driven Topologies**

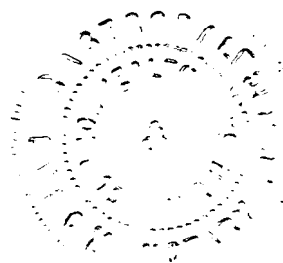
(1 of 7)

Copy of the Notice

As indicated on the USPTO notice received 06/03/02, one original signed copy of this notice, Confirmation Number 6549, is attached for your reference.

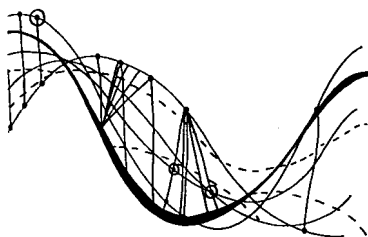
Date: 7.1.04

by: 
Deborah L. MacPherson, Vienna VA



Notarized by Rowan Castrodale
Notary Public Commission expires 8/31/05

State / District of Virginia
City / County of Alexandria
The foregoing instrument was acknowledged before me this 1st
day of July, 2004, by Deborah L. MacPherson
Rowan Castrodale
Notary Public
My commission expires: 8-31-05



U.S. Application Number: 10/803,040
Filing Date: 03/18/2004
Inventor: Deborah L. MacPherson
118 Dogwood St, Vienna VA 22180
Phones 703 242 9411 and 703 585 8924
Title of Invention: **Context Driven Topologies**

(2 of 7)

Substitute Specification

A Substitute Specification is attached in hardcopy and CD. See (3 of 7) Drawings, (4 of 7) Black and White Photograph/Embedded Image, and (5 of 7) Petition to the Examining Officer for more information.

RELEVANT INFORMATION:

1.52 Language, paper, writing, margins:

(a) All papers ...must be legibly written mechanical printer in permanent dark ink or its equivalent in portrait orientation on flexible, strong, smooth, non-shiny, durable, and white paper.

(b) Except for drawings, the application papers with the claims commencing on a separate sheet and the abstract commencing on a separate sheet. Each sheet must include a top margin of at least .75 inch, a left side margin of at least 1 inch, a right side margin of at least .75 inch, and a bottom margin of at least .75 inch. The lines of the specification, and any amendments to the specification, must be 1 1/2 spaced. The pages of the specification including claims and abstract must be numbered consecutively, starting with 1, the numbers being centrally located above or preferably, below, the text.

(c) Application papers containing alterations made after the signing of an oath or declaration referring to those application papers must be supported by a supplemental oath. After the signing of the oath referring to the application papers, amendments may only be made in the manner provided by 1.121.

[43 FR 20462, May 11, 1978; paras. (a) and (d), 47 FR 41275, Sept. 17, 1982, effective Oct. 1, 1982; para. (c), 48 FR 2709, Jan. 20, 1983, effective Feb. 27, 1983; para. (d), 49 FR 554, Jan. 4, 1984, effective Apr. 1, 1984; para. (c), 57 FR 2021, Jan. 17, 1992, effective Mar. 16, 1992; paras. (a) and (b) amended, 61 FR 42790, Aug. 19, 1996, effective Sept. 23, 1996; paras. (a), (c) & (d) revised, 62 FR 53131, Oct. 10, 1997, effective Dec. 1, 1997]

1.121 Manner of making amendments:

Amendments in nonprovisional applications, excluding reissue applications, are made by filing a paper, in compliance with 1.52 (above), directing that specified amendments be made.

(a)(1) Specification other than the claims. (ii) Instructions for deletions: The precise point in the specification must be indicated where a deletion is to be made, and the matter to be deleted must be set forth or otherwise indicated.

(a)(6) No amendment may introduce new matter into the disclosure of an application.

(b)(1) Amendments in reissue applications are made by filing a paper, in compliance with 1.52 (above) directing that specified amendments be made. **(ii)** The precise point in the specification must be indicated where the paragraph to be amended is located. **(iii)** Underlining below the subject matter added to the patent and brackets around the subject matter deleted from the patent are to be used to mark the amendments being made.

[32 FR 13583, Sept. 28, 1967; 46 FR 29183, May 29, 1981; para. (e), 49 FR 555, Jan. 4, 1984, effective Apr. 1, 1984; revised, 62 FR 53131, Oct. 10, 1997, effective Dec. 1, 1997]

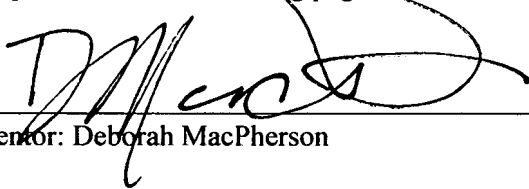
1.125 Substitute Specification

(b) A substitute specification, excluding the claims, may be filed at any point up to payment of the issue fee if it is accompanied by: **(1)** A statement that the substitute specification includes no new matter; and **(2)** A marked-up copy of the substitute specification showing the matter being added to and the matter being deleted from the specification of record.

[48 FR 2712, Jan. 20, 1983, effective Feb. 27, 1983; revised, 62 FR 53131, Oct. 10, 1997, effective Dec. 1, 1997]

ACTION/ENCLOSED 1:

As stated further in (6 of 7) Notarized Supplemental Oath, this Substitute Specification includes no new matter. The minor modifications to meet USPTO regulations and requirements, including renumbering the specification and drawing pages, are directed by the inventor to be made.



Inventor: Deborah MacPherson

OVERVIEW:

The entire specification is reprinted on 24 pound (90gsm) paper with a brightness of 113+. The sheets are all the same at 8 1/2 by 11 inch with .75 inch margins (top, bottom, right), and 1 inch margin (left) using black inks on a Canon i850 mechanical inkjet printer and provided as digital files on CD. As detailed in the following pages, with the exceptions listed below:

- Replacement of the embedded image with three photographs and a placeholder
- Adjustments to overall specification page numbers to give the Drawings their own page numbers
- Removal of paragraphs in the original specification's Introduction, Notes, and Endnotes
- Removal of text references to the original page numbers and introduction notes.
- Page breaks before and after the Abstract, and before the Claims
- Move Definition of Machines to introduce B (Field, Background, Prior Art)
- Three grammatical changes from a comma to a period and new sentence
- A review and correction of line breaks/spaces between paragraphs for consistency (caused by the revised page breaks and adjusted margins)

the attached document in both ink on paper and digital form do not introduce any new matter, amendments, or modifications into the original disclosure including the drawings and claims.

DIGITAL FILES:

These same Substitute Specifications are also provided on the enclosed CD as digital files in Microsoft Word (2002, 10.4524.4219 SP-2). This CD also includes (Mac) Photoshop 7 high resolution scans (both "flattened" as .jpgs and "layered" as .psd) of the Drawings, see (3 of 7) Drawings for more information.

The CD is titled **DMacP10 803 040**.

File "**DMacPUSPTOSubstSpec**" size 653 KB, contains extra line spaces and instructions to place the embedded image. See (4 of 4) Black and White Photograph. Please notify the inventor if this placeholder should be removed, if so, an online transmission is preferred.

Please notify the inventor if these files should be submitted to an .ftp or other USPTO internet site to preview and check formatting when the front page drawing, Figures 1 to 10 Drawings, and embedded image are introduced. See (5 of 7) Petition to the Patent Examiner with a formal request to verify this context, image scaling, and overall appearance are correct for the Specification of Record in various publishing and storage formats.

EMBEDDED IMAGE

Please see (4 of 7) and (5 of 7) to replace the embedded image with three black and white photographs.

PAGE NUMBERS AND INTRODUCTORY STATEMENTS AND NOTES:

In the original specification, the drawings were numbered as an integral part of the specification page numbers. The original application included the required USPTO patent application forms followed by a page number 1 cover sheet including the front page drawing (portion of Figure 10C) and table of contents. This was followed on pages 2 to 4 with Introductory Statements and Notes. Most of these notes were directed to the USPTO examiners. The Introductory Statements and Notes that apply to the specification (rather than to the USPTO internally) remain in the attached document. The Introductory Statements, Notes, and Endnotes intended primarily for the USPTO are transmitted below for reference and should be included in all correspondence and records between the USPTO and the inventor.

<Original> List of Contents:

Form PTO/SB/05 Utility Patent Application Transmittal Form
Form PTO/SB/01A Declaration (37 CFR 1.63) Using an Application Data Sheet (37 CFR 1.76)
Form PTO/SB/17 Fee Transmittal Form, claiming small entity status (PTO/SB/09 no longer required)
Form PTO-1209 Notarized Oath, delivered by hand to the USPTO in Arlington Virginia
Notice of Customer No. 000041426 Assignment mailed January 30, 2004
Introduction and Notes to the Specifications, pages numbered 2 to 4

Context Driven Topologies Specifications, pages 5 to 118
Drawings, pages 14 to 23
Claims 1 to 10, pages 94 to 118

<Original> INTRODUCTION AND NOTES TO THE SPECIFICATIONS

<Title, Inventor, Description, most of References Cited remain in the Substitute Specification>

References Cited: (Cross Reference to Related Applications: N/A)

- **"Digitizing the Non-Digital"** abstract accepted 2.25.04 by David Harlan, California State University (CalPoly) for "Rethinking History, The Journal of Theory and Practice", published quarterly by Routledge. Final Manuscript to be submitted no later than 10.1.04.
- USPTO Form PTO/SB/125A Request for Customer Number, 000041426, issued 01.30.04

Statement Regarding Federally Sponsored Research or Development: It is anticipated a substantial portion of future research and the development of technologies prompted and enabled by the invention will be undertaken together with both individual partners and research institutions, and that a significant portion of these research and development costs will be proposed to federal agencies for sponsorship. See Section C FUTURE PLANS FOR THE INVENTION / GENERAL NOTES for more information.

Reference to Sequence Listing, Table, or Computer Program Listing Compact Disk Appendix: N/A

Assignee: Application for a grant to the patentee, her heirs or assigns, for the right to exclude others from making, using, developing technologies for, offering for sale, selling or distributing the invention throughout the US and other countries, or importing/exporting the invention into and out of the US and other countries. Assigning the invention to another individual, public or private institution or company is at the sole discretion of the inventor, her heirs or assigns, as specified in the notice and statements below.

General Statement: The invention is one new idea, by the inventor, using the steps of a mathematical process to generate a limitless series of interrelated knowledge patterns, memory forms, and display patterns interpreted through an evolving automatic audio and visual language, and streamlined over time through the use of a shared memory. The inventor's purpose for seeking this patent includes the exclusive right to: create and define the original set of patterns through the project disclosed in "C" and [Figure 6]; distribute this system in an open source manner; submit the core principles of this concept and process to US federal and international agencies for sponsorship; form agreements with information technology companies for commercial products related to the open source. The Specifications, Descriptions, Drawings and Claims herein are interrelated and interdependent. This document is original work by the Inventor combined with meaningful improvements or significant modifications to existing inventions by others identified and carefully reviewed, by the inventor, within the field of the search indicated below and (Claim 10 of 10).

Statement on Classifications: The invention provides a more efficient and comprehensive method to search, map and cross reference intellectually assigned subject matters of all types by providing specific mechanisms to include or eliminate more variables and characteristic features than key word and other existing data classification systems allow. See the Drawings for an illustration. It is the inventor's position that all classifications of any type are intellectually applied and potentially ambiguous, which is precisely

why the invention will be useful in our new, connected, digital information age. The invention disclosed and claimed herein is such a complete change from current practices, the inventor's own assessment of the most accurate classification is enumerated as an integral component of these specifications to help 'place' and 'identify' the disclosed subject matters as they compare to existing subject matters. USPTO and International classes and subclasses in direct concordance to the idea and process as described and illustrated within this document are listed below; future uses and future technologies, as indicated by a thorough search of prior art, in conceptual and early practical development by the inventor and may be submitted for additional, more comprehensive patent protection in the future with or without research partners and/or may be claimed to have been prompted and enabled by the invention if initiated by others, are listed at the end of **(Claim 10 of 10)**.

Existing inventions closest to this new invention involve "harmonization".

The current embodiment of the invention is based on non-hypothetical machines (See definition on page 5). However, invention is independent of electricity and therefore without direct linguistic correspondence to existing Electronic and Electrical Classifications. Nevertheless, the invention is directly, conceptually, and practically related to subject matters intellectually assigned to 2004 Electronic and Electrical Classifications.

US Classifications:

073; 084/464R, 623; 235; 326; 327/13, 15-17, 24, 42, 94, 106; 340; 341/4, 8, 9, 28, 52, 54, 109, 111, 113, 138, 142, 145, 156, 163, 200; 342; 345/2.2; 27, 53, 93, 98, 162, 171, 208, 427, 428, 440, 440.1, 440.2, 441, 442, 467-469, 469.1, 472, 475, 505, 535, 541, 542, 549, 551, 552, 559, 561, 563-565, 568, 572, 581, 582, 585, 568, 588, 591, 595, 597-599, 606, 607, 621, 622, 626, 631, 634, 636, 637, 641, 643, 645, 651, 655, 660, 662, 667, 677, 681, 682, 686, 687, 691, 694, 696, 703, 707, 708, 712, 713, 721, 731, 763, 774-777, 794, 801, 807, 816, 817, 821, 837, 838, 839, 849, 853, 854, 860, 861, 953, 965, 967; 347/15, 19, 49; 356/71; 360/13, 29, 30; 367/7, 11, 27; 368; 369/5, 30.44; 380/42, 206, 209; 382/108, 113, 116, 117, 148, 168, 170, 184, 185, 190, 199, 203, 210, 219, 224, 229, 240, 243, 247, 268, 280, 283, 304; 385/122, 141; 480; 434; 700/5, 50, 104, 125, 246; 702/ 73, 77, 80, 124, 147, 195; 703/2; 704/9, 243, 245, 257, 276, 277; 706/4, 12, 14, 45-48, 52, 55, 58, 900; 707/6, 100, 103R, 103Y, 103X, 103Z, 204; 708/111, 208, 272, 304, 308, 317, 403-405, 410, 424, 506, 531, 534, 622, 632, 671, 819, 820, 821-823; 709/213, 215, 231; 710/16; 711/110, 117, 120, 147, 148, 158, 172; 712/240; 713/100, 600; 715/513, 514, 518, 520, 521, 535, 907; 968/47, 152, 201, 290

International Classifications:

G06F 3/00, 7/00, 7/10, 7/16, 7/70, 9/44, 9/45, 9/445, 11/00, 12/02, 13/00, 13/10, 13/38, 15/00, 15/16, 15/18, 15/30, 15/57, 17/00, 17/21, 17/24, 17/27, 17/30, 17/60; G06N 003/04; G09B 1/00; H04L 1/00, 7/00, 09/00, 27/26M1A, 1/00A1M, 1/00A3, 1/00A5, 1/00A7, 1/00B1, 1/00B2, 1/00B2B

Field of Search: See APPENDIX A with **(Claim 10 of 10)** and **[Fig. 10]**.

Notice: The invention entitled Context Driven Topologies including these Specifications, Drawings, Descriptions, Steps, Processes and Claims herein are intended by the inventor Deborah L. MacPherson to be fully consistent and in compliance with the Freeman-Walter-Abele test; statutory subject matters under Section 101 of the Patent Act; and current shared understanding of all applicable United States and International laws including but not limited to: 35 U.S.C. 101; 35 U.S.C. 102; 35 U.S.C. 103; 35 U.S.C.

112 including the 2nd and 6th paragraphs; 35 U.S.C. 154 including section (d) Provisional Rights as applicable; and all other statutory requirements and criteria including any binding precedents of the United States Supreme Court, the U.S. Federal Circuit; the Federal Circuit's predecessor courts; and International laws or courts which are not listed because they are unknown to the Inventor at the time this patent application was submitted and intended to be fully consistent and in compliance with the statutory requirements and criteria listed above, qualified by the statement below, and in paragraph (**Claim 9 of 10**). This patent is intended to be submitted for a term beginning on the date on which the patent issues and ending 20 years from this date March 18, 2004 which this patent application was filed in the United States as an original hard copy, including the notarized oath, hand delivered by the inventor herself to the United States Patent and Trademark Office (USPTO) in Arlington Virginia.

Statement on Classifications and Statutory Requirements: Because this document was prepared without a lawyer and the inventor has no prior patent application experience, the inventor's own assessment of the appropriate classifications and the precise fulfillment of each statutory requirement and criteria may be slightly incorrect and not as precise or comprehensive it should be due to the inventor's lack of background knowledge about patent procedures and protections; therefore, the most accurate US and International classifications and specification terminology to meet the appropriate statutory requirements and criteria to provide the most comprehensive and long term protection for this invention and the inventor, is left to the sole discretion of the USPTO. Due to the competitive nature and rapid pace of technological development in the field of the invention, please contact the inventor immediately if a lawyer is recommended, if the submitted fees are insufficient, or if the specifications and/or claim language should be modified in any way.

Inventor Contact Information:

Deborah L. MacPherson, USPTO Customer Number: 000041426

address: 118 Dogwood Street, Vienna, Virginia 22180-6394 USA

phone: 703 242 9411, cell: 703 585 8924, fax: 703 242 4127

email: dmacp.mail@verizon.net

portfolio: www.accuracyandaesthetics.com

project: www.contextdriventopologies.org

Therefore, the Substitute Specification pages have been renumbered as follows:

Page 1

Title, Inventor, Description, References Cited, Table of Contents

Page 2

A1. Abstract of the Disclosure

The abstract within the original specifications did commence on a separate sheet, however, the abstract was not the only information on this page. This has also been corrected on the attached document. Please notify the inventor if the pages 1 and 2 should switch places (so the Abstract can be on page 1).

Pages 3 to 7

Definition followed by **B1.** Field of the Invention / **B2.** Background of the Invention / **B3.** Prior Art

Pages 7 to 9

C. Future Plans for the Invention / General Notes

Page 9

D. Brief Summary of the Invention

Pages no longer numbered within the description page numbers

E. Drawings, Figures 1-10. In the original specifications, the drawings were numbered as an integral part of the overall specification. This has been corrected. As indicated in (3 of 7) Drawings, the drawings are now numbered individually and apart from the Substitute Specification pages. Because of extensive referencing between all parts of the specification, "E" is still needed to represent the place for the drawings in the inventor's overall explanation, even if the drawings themselves are inserted before the abstract lettered "A" on page 2 in the substitute specification.

Pages 10 to 17

F1. Brief Drawing Descriptions / **F2.** Detailed Drawing Descriptions

Pages 17 to 80

G. Detailed Disclosure and Specific Embodiments of the Invention

Sections

1. Context Driven Topology
2. Concept Boundaries and the Annotation Process
3. Symbolic Characters and their Function
4. Evolving Mathematical Knowledge Patterns Converted into Multidimensional Wave Forms
5. Metaphors
6. Monitoring, Controlling, and Influencing Information Placement and Proximity over Time
7. Use of the Automatic Evolving Audio and Visual Language and Display Patterns
8. Shared Memory
9. Data Curation and Digital Preservation
10. Specific Embodiments and Applications

Note: It has been realized by the inventor in her review of these specifications, that paragraphs 7.26 and 9.21 are practically the same. Nevertheless, this is a difficult and important concept to convey, understanding this aspect of the idea is critical to understanding the disclosure, therefore, it has been kept in both places with the original language.

Pages 81 to 104

H. Claims 1-10

Page 104 is the last page. Both the Original and Substitute Specifications end after Appendix A with Claim 10. See (5 of 7) Petition to the Patent Examiner for more information particularly related to Appendix A and the Claims.

The original specification also contained the following endnotes:

FEES

See **Form PTO/SB/17**, final and actual fees to be verified by the USPTO. The inventor is an individual, claiming "Small Entity Status" as indicated by 37 CFR 1.27. Fees submitted by the inventor with the specifications and other application materials herein include the Basic filing fee – Utility \$385.00 and independent claims in excess of three \$43.00 – total \$428.00 US. International provisions, and other fees are to be determined in cooperation with USPTO, the inventor and her designated attorney(s) or agent(s), and possible research partners (C) [Fig. 6]. Please see the introduction pages 1 to 4 and (Claims 1 to 10) for more information on the intention of this patent application and protection.

Inventor Contact Information:

Deborah L. MacPherson, USPTO Customer Number: 000041426

address: 118 Dogwood Street, Vienna, Virginia 22180-6394 USA

phone: 703 242 9411, cell: 703 585 8924, fax: 703 242 4127

email: dmacp.mail@verizon.net

portfolio: www.accuracyandaesthetics.com

project: www.contextdriventopologies.org

These endnotes have also been removed from the Substitute Specification but should be included in all correspondence and records between the USPTO and the inventor.

REMOVAL OF TEXT REFERENCES TO THE ORIGINAL PAGE NUMBERS AND NOTES:

(1 of 3)

1.121 (b)(1)(ii) The page affected by the removal below is the top of Appendix A which is an integral, critical part of Claim 10 on (new) page 89 (Page 102 in the original specification).

1.121 (b)(1)(iii) To coordinate the meaning of the text introducing Appendix A with removal of the Introductory Notes, the following text {indicated within curly brackets} has been removed:

Original specification/Introduction to Appendix A with Claim 10:

The classes below indicate the most of the inventor's field of search. **Bold** indicates the inventors own assessment of the most appropriate classifications {as listed in the introduction to these specifications}, *Italic* indicates future technologies in conceptual and/or early practical development, plain are classifications that {were retrieved on the search and included below because they} may have applications related to the invention's future embodiments. {See **Page 3** of application for a statement on classification.}

to Substitute Specification/Introduction to Appendix A with Claim 10:

The classes below indicate most of the inventor's field of search. **Bold** indicates the inventors own assessment of the most appropriate classifications, *Italic* indicates future technologies in conceptual and/or early practical development by the inventor, plain are classifications that may have applications related to the invention's future embodiments.

(2 of 3)

1.121 (b)(1)(ii) The page affected by the removal below is (new) page 9 (Page 13 in the original specification).

1.121 (b)(1)(iii) To coordinate the meaning of the text in the Substitute Specification with these revised page numbers, the following text {indicated within curly brackets} has been removed:

Original specification/page 13:

E. DRAWINGS

Figures 1-10 {follow on pages 14 to 23}

Substitute Specification/page 9:

E. DRAWINGS

Figures 1-10

(3 of 3)

1.121 (b)(1)(ii) The page affected by the removal below is (new) page 10 (Page 13 in the original specification).

1.121 (b)(1)(iii) To coordinate meaning of the text in the Substitute Specification with the revised page numbers, the references to page numbers at the end of paragraph **F1** {indicated within curly brackets} has been removed:

Original Specification/page 13:

"Views within the Drawings are indicated by a numbered gray circle that corresponds to a **(bold number in brackets)** in the detailed descriptions. References to paragraphs and sections within the text are *italic*.
{**F2. DETAILED DESCRIPTIONS OF THE DRAWINGS** follow on pages 24 to 30"}"

Substitute Specification/page 10:

"Views within the Drawings are indicated by a numbered gray circle that corresponds to a **(bold number in brackets)** in the detailed descriptions. References to paragraphs and sections within the text are *italic*."

MOVE DEFINITION:

The following definition located on page 5 of the original specification, has been moved to Section B, before paragraph B1 on page 3 in the Substitute Specification. This definition is repeated in Claim 3.

Definition: The word "Machine" as it is used throughout these specifications is intended to mean a computer with a life expectancy of five to ten years - including an operating system or platform (ex. Mac or PC) that may be incompatible with other systems or platforms, various shared and specialized software with a life expectancy of one to three years, and an internet connection equal to current DSL or Broadband. The word "Machines" as it is used in these specifications is intended to mean advanced networks of machines that change and improve over one person, research group, or entire field of study's lifetime.

GRAMMATICAL CHANGES:

Three grammatical changes in punctuation from a comma to a period and new sentence were edited by the inventor to improve flow. There are several occurrences throughout this text that would benefit from improved punctuation, but only these three worst run sentences were broken into two separate sentences. The inventor apologizes for the prevalence of run on sentences throughout the specification.

CORRECTION OF LINE BREAKS/SPACES BETWEEN PARAGRAPHS:

To provide as clean and consistent digital file as possible, the inventor has verified there are no extraneous or missing line returns caused by renumbering the pages and adjusting the margins.

SUMMARY:

1.121 As notified in (1 of 7) Copy of the Notice, each of these specified amendments: correction of the embedded image; modifications to the page numbers and corresponding text; higher quality print outs and digital files; re-transmittal of portions of the introduction, notes, and endnotes included in the original specification. As these specified amendments are dependent on a petition to include the front page drawing and Figure 1 to 10 Drawings as indicated in (3 of 7) Drawings, and a petition to include the image as specified and provided in (4 of 7) Black and White Photograph/Embedded Image, as explained further in (5 of 7) Petition to the Examiner, and as promised in (6 of 7) Notarized Supplemental Oath these specified amendments, modifications and other differences between the original and substitute specification are directed by the inventor to be made.

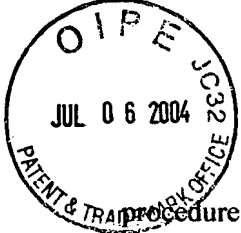
Date: 7.1.04

by: [Signature]
Deborah L. MacPherson, Vienna VA

State/District of Virginia
City/County of Alexandria

Notarized by Rowan Castrodale
Notary Public Commission expires 8/31/05

The foregoing instrument was acknowledged before me this 1st
day of July, 199 by Deborah L. MacPherson
2004 Rowan Castrodale
Notary Public



procedures, the era which this work was created, the natural subject matter of this abstract painting, and other reasons that have been carefully explained beginning in paragraph 2.3 and culminating in paragraph 3.14. A different image would not be as effective, the inventor's point is made clearer using this embedded image. A picture is worth a thousand words.

Please also see (5 of 7) Petition to the Examiner.

APPROPRIATE FEE:

Per 37 CFR 1.17(i) [Reference http://www.bitlaw.com/source/37cfr/1_17.html] a **130.00** fee is enclosed

<CHECK ATTACHED HERE>

personal check number 427
bank routing number 255071981
account number 1663200530

PHOTOGRAPHS:

Attached are three (3) black and white photographic prints permanently mounted to archival quality acid free board, along with permission to publish and use within this specification from Amy Densford Image Rights and Reproductions at the Smithsonian Institution Hirshhorn Museum and Sculpture Garden where this painting resides and is currently displayed for public viewing. The back of each print includes the Hirshhorn identification, the application number, and the inventor's signature.

Date: 7.1.04

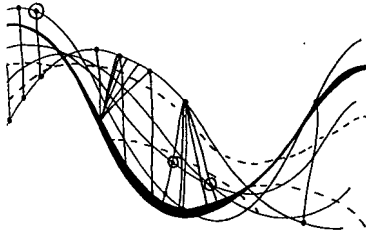
by: [Signature]
Deborah L. MacPherson, Vienna VA

State / District of Virginia
City / County of Alexandria

The foregoing instrument was acknowledged before me this 1st
day of July, 199, by Deborah L. MacPherson
2004 Rowan Castrodale

Notary Public
My commission expires: 8-31-05

Notarized by Rowan Castrodale
Notary Public Commission expires 8/31/05



U.S. Application Number: 10/803,040
Filing Date: 03/18/2004
Inventor: Deborah L. MacPherson
118 Dogwood St, Vienna VA 22180
Phones 703 242 9411 and 703 585 8924
Title of Invention: **Context Driven Topologies**

(5 of 7)

Petition to the Examiner

A. Please capitalize each word of the title “Context Driven Topologies” in all records and publications.

B. Request for a meeting with the assigned patent examiner to discuss the invention’s classification beyond preliminary Class 706 (Artificial Intelligence) and Art Unit 2121 (Cryptography and Security) to include data streaming, visualization, display, digital preservation, horology, and other concepts as indicated in:

- Paragraph **(B1.5)** pages 4 and 5
- The Drawings
- Paragraph **(1.25)** pages 22 and 23
- Paragraph **(2.13)** page 29
- Paragraph **(3.38)** page 39
- Paragraph **(4.18)** page 42
- Paragraph **(6.10)** page 46
- Paragraph **(9.22)** page 75

and specifically enumerated in:

- Paragraph **(7.49)** pages 58 and 59
- Paragraph **(8.26)** page 68
- The **Claims** pages 81 to 104

The invention is such a marked departure from the way we typically envision and understand digital information and digital collections that these classifications are needed to show where this invention belongs in relation to other inventions. Therefore, both the original and substitute specification contain these specific references to US Patent and Trademark Office Classifications to clearly identify subject matters the inventor knows will apply to the core principles of this invention in the future. These classifications are an integral part of this patent protection.

Please notify the inventor if these specific references to USPTO classifications are not permitted, and please also explain the reason.

C. For the reasons stated in (4 of 7), this is a petition for the photograph "Delaware Gap" by Franz Kline to be accepted and included as a black and white image within the specification in G. Detailed Disclosure and Specific Embodiments of the Invention, **Section 3. Symbolic Characters and their Function, Paragraph 3.14**, on page 33 (formerly page 47, see 1 of 7 Copy of the Notice). Please notify the inventor if this critically selected and placed image is not permitted, and please also explain the reason.

D. Petition for the inventor to verify the context, image scaling, and overall appearance of the specification text, image, and drawings are correct and as intended for the Specification of Record in each known publishing and storage format. Please notify the inventor how, or if, these documents and formats may be reviewed for both accuracy and aesthetics.

E. This invention was created for the interpretation and preservation of large scale dynamic data collections, it is the inventor's opinion (prompted by a detailed search and interpretation of several USPTO prior art collections related to the enclosed specifications) that the USPTO is responsible for one of the most complex, interconnected, growing, and unique digital collections in the world. Like many complex collections, the USPTO digital collection has infinite close ties to non-digital artifacts and knowledge, it is also a system built upon a logic that originated prior to the digital revolution. Therefore, the nature and special purposes of the USPTO digital collection could be one of the most relevant and challenging use of the invention.

Perhaps the techniques disclosed in these specifications could be used as an augment to the existing Image File Wrapper (IFW) and other USPTO document management systems to help the USPTO store, organize, cross reference, interpret, and display large sets of original patent drawings, images, patent subject matters, art units, and prior art collections. Therefore, this letter is a Petition for the Examiner to consider the use of this invention for these purposes. If this petition is practical or interesting to the USPTO, please forward this message and the specification to the appropriate USPTO personnel and contact the inventor to discuss.

F. If these techniques can be proven to work in a controlled and effective manner compatible with the USPTO recordkeeping methods and complex content, an interesting and appealing interactive exhibition of original USPTO patent drawings as ink on paper and a demonstration of these digital techniques could be created by USPTO curators and the inventor to increase public awareness of the USPTO system and show a history of American inventions. Many patent drawings, especially for older ground breaking inventions, could easily be considered by many people to be a form of artwork worthy of an exhibition.

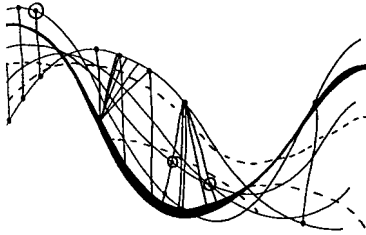
G. Petition to the Examiner to notify the inventor that the page renumbering, image placement, and all other purposes for creating the substitute specification are now correct.

Date: 7.1.04

by: [Signature]
Deborah L. MacPherson, Vienna VA
State/District of Virginia
City/County of Alexandria

Notarized by Rowan Castrodale
Notary Public Commission expires 8/31/05

The foregoing instrument was acknowledged before me this 1st
day of July, 2004, by Deborah MacPherson
Rowan Castrodale
Notary Public
My commission expires: 8-31-05



U.S. Application Number: 10/803,040
Filing Date: 03/18/2004
Inventor: Deborah L. MacPherson
118 Dogwood St, Vienna VA 22180
Phones 703 242 9411 and 703 585 8924
Title of Invention: **Context Driven Topologies**

(6 of 7)

Notarized Supplemental Oath

In addition to the Notarized Oath submitted to the United States Patent and Trademark Office on March 18, 2004 on Form PTO-1209 and delivered by hand to the USPTO in Arlington Virginia - I Deborah L. MacPherson do solemnly swear and affirm that if admitted to practice before the United States Patent and Trademark Office: I will observe the laws and rules of practice of the United States Patent and Trademark Office. I will maintain the respect due to the United States Patent and Trademark Office and the officials thereof. I will not counsel or maintain any application or proceeding which shall appear to me to be unjust, nor will I take any action except such as I believe to be honestly debatable under the law. I will employ for the purpose of maintaining the causes confided to me such means only as are consistent with truth and honor and will never employ political influence nor seek to mislead officials of the Office by any artifice or false statements of fact or law. When or if I have a patent attorney, I will insist they maintain in confidence and preserve inviolate the secrets of my invention and accept no compensation in connection with my business except from me or with my written approval. I will abstain from all offensive personality and advance no fact prejudicial to the honor or reputation of a party or witness unless required by justice of the cause with which I am charged. I will not delay any man or womans cause for lucre or malice. As set forth in 37 C.F.R. 1.16, a check is attached on the next page.

In addition to the oath above and the oath submitted on March 18, 2004 with the original application number 10/803,040 - I Deborah L. MacPherson do solemnly swear and affirm that there is no new subject matter within this submittal. Furthermore, that these modifications between the original and substitute specification are to comply with USPTO publication and storage requirements.

Date:

7.1.04

by:

Deborah L. MacPherson, Vienna VA

State / District of Virginia

City / County of Alexandria

The foregoing instrument was acknowledged before me this 1st
day of July, 199, by Deborah L. MacPherson

2004 Rowan Castrodale

Notary Public

Notarized by Rowan Castrodale

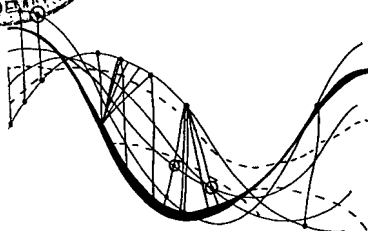
Notary Public Commission expires 8/31/05

My commission expires: 8-5-05

Per 37 C.F.R. 1.16, National application filing fees. (e) Surcharge for filing the basic filing fee or oath or declaration on a date later than the filing date of the application, except provisional applications:
By a small entity **(1.9(f))** 65.00 is attached

<CHECK ATTACHED HERE>

personal check number 429
bank routing number 255071981
account number 1663200530



U.S. Application Number: 10/803,040
 Filing Date: 03/18/2004
 Inventor: Deborah L. MacPherson
 118 Dogwood St, Vienna VA 22180
 Phones 703 242 9411 and 703 585 8924
 Title of Invention: **Context Driven Topologies**

(7 of 7)

Postcard to Acknowledge Receipt of these Documents

The following items related to application 10/803,040 were received:

- ☐ (1 of 7) Copy of the Notice
- ☐ (2 of 7) Substitute Specification
- ☐ (3 of 7) Drawings
- ☐ (4 of 7) Three copies of a Black and White Photograph with \$130 fee per 37 CFR 1.17(i).
- ☐ (5 of 7) Petition to the Examining Officer
- ☐ (6 of 7) Oath with \$65 fee per 37 C.F.R. 1.16
- ☐ (7 of 7) This Postcard

FROM:

Mail Stop Missing Parts
 Commissioner for Patents
 P.O. Box 1450
 Alexandria VA 22313-1450

TO:

Deborah L. MacPherson
 118 Dogwood Street
 Vienna, VA 22180 USA

The images on the other side of this card were generated by the participants of the upcoming Project (C)[Fig.6]10/803,040

Date:

7.1.04

by:

[Signature]

Deborah L. MacPherson, Vienna VA

State / District of Virginia
 County of Alexandria

The foregoing instrument was acknowledged before me this 1st
 day of July, 1999 by Deborah L. MacPherson
2004 Rowan Castrodale

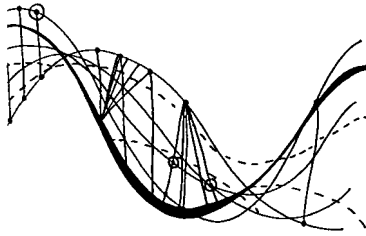
Notarized by Rowan Castrodale

Notary Public Commission expires 8/31/05

My commission expires:

8-31-05

Notary Public



U.S. Application Number: 10/803,040
Filing Date: 03/18/2004
Inventor: Deborah L. MacPherson
118 Dogwood St, Vienna VA 22180
Phones 703 242 9411 and 703 585 8924
Title of Invention: **Context Driven Topologies**

(4 of 7)

Black and White Photograph/Embedded Image

RELEVANT INFORMATION:

(1 of 7) Copy of the Notice First bulleted item: The specifications are not acceptable and cannot be scanned or properly stored because the specification contains drawings or flow diagrams (37 CFR 1.58 (a)) on page 47. Drawings or flow diagrams should be submitted separately in accordance with 37 CFR 1.84.

37 CFR 1.58 (a) The specification, including the claims, may contain chemical and mathematical formulas, but shall not contain drawings or flow diagrams. The description portion of the specification may contain tables; claims may contain tables either if necessary to conform to 35 U.S.C. 112 or if otherwise found to be desirable.

[43 FR 20463, May 11, 1978; para. (b) removed and reserved, para. (c) amended, 61 FR 42790, Aug. 19, 1996, effective Sept. 23, 1996]

§112. The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

[Patent Laws; United States Code, Title 35 - Patents; Part II - Patentability of Inventions and Grant of Patents; Chapter 11 - Application for Patent; 112 Specification]

37 CFR 1.84 Standards for drawings, **(b) Photographs, (1) Black and white:** the Office will accept photographs only after granting a petition filed under this paragraph which requests that photographs be accepted. Any such petition must include the following: (i) The appropriate fee set forth in 37 CFR 1.17(i) and (ii) Three (3) sets of photographs developed on photographic paper permanently mounted on Bristol board. The photographs must be of sufficient quality so that all details are reproducible. [24 FR 10332, Dec. 22, 1959; 31 FR 12923, Oct. 4, 1966; 36 FR 9775, May 28, 1971; 43 FR 20464, May 11, 1978; 45 FR 73657, Nov. 6, 1980; paras. (a), (b), (i), (j), and (l) amended, paras. (n), (o), and (p) added, 53 FR 47809, Nov. 28, 1988, effective Jan. 1, 1989; revised, 58 FR 38719, July 20, 1993, effective Oct. 1, 1993; paras. (c), (f), (g), and (x) revised, 61 FR 42790, Aug. 19, 1996, effective Sept. 23, 1996; paras. (a)(2)(i), (b), (c) & (g) revised, 62 FR 53131, Oct. 10, 1997, effective Dec. 1, 1997]

37 CFR 1.17 Patent application processing fees. (i) For filing a petition to the Commissioner under a section listed below which refers to this paragraph - 130.00
[Added 47 FR 41273, Sept. 17, 1982, effective Oct. 1, 1982 ; para. (h), 48 FR 2708, Jan. 20, 1983, effective Feb. 27, 1983; para. (h), 49 FR 13461, Apr. 4, 1984, effective June 4, 1984; para. (h), 49 FR 34724, Aug. 31, 1984, effective Nov. 1, 1984; paras. (e), (g), (h) and (i), 49 FR 48416, Dec. 12, 1984, effective Feb. 11, 1985; paras. (h), (n) and (c), 50 FR 9379, Mar. 7, 1985, effective May 8, 1985; 50 FR 31824, Aug. 6, 1985, effective Oct. 5, 1985; paras. (a)-(m), 54 FR 6893, Feb. 15, 1989, 54 FR 9431, March 7, 1989, effective Apr. 17, 1989; para. (i)(1), 54 FR 47518, Nov. 15, 1989, effective Jan. 16, 1990; paras. (a)-(o), 56 FR 65142, Dec. 13, 1991, effective Dec. 16, 1991; para. (i)(1), 57 FR 2021, Jan. 17, 1992, effective March 16, 1992; para. (p) added, 57 FR 2021, Jan. 17, 1992, effective March 16, 1992; para. (i)(1), 57 FR 29642, July 6, 1992, effective Sept. 4, 1992; corrected 57 FR 32439, July 22, 1992; paras. (b)-(g), (j), and (m)-(o), 57 FR 38190, Aug. 21, 1992, effective Oct. 1, 1992; para. (h), 58 FR 38719, July 20, 1993, effective Oct. 1, 1993; paras. (b)-(g), (j) and (m)-(p), 59 FR 43736, Aug. 25, 1994, effective Oct. 1, 1994; paras. (h) & (i) amended and paras. (q)-(s) added, 67 FR 20195, Apr. 25, 1995, effective June 8, 1995; paras. (b)-(g), (j), (m)-(p), (r) & (s) amended, 60 FR 41018, Aug. 11, 1995, effective Oct. 1, 1995; paras. (b) - (g), (j), (m)-(p), (r) and (s) amended, 61 FR 39585, July 30, 1996, effective Oct. 1, 1996; paras. (b) - (g), (j), (m) - (p), (r) & (s) amended, 62 FR 40450, July 29, 1997, effective Oct. 1, 1997; paras. (a) - (d), (h), (i) & (q) revised, paras. (e) - (g) reserved, 62 FR 53131, Oct. 10, 1997, effective Dec. 1, 1997; para. (q) corrected, 62 FR 61235, Nov. 17, 1997, effective Dec. 1, 1997]

ACTION/ENCLOSED:

The following items are attached:

- Rationale for embedding this image within the specification
- The appropriate fee - \$130 - as set forth in 37 CFR 1.17(i)
- Three (3) sets of photographs, as set forth in 37 CFR 1.84(b)(1)(ii)

RATIONALE FOR EMBEDDING THIS IMAGE WITHIN THE SPECIFICATION:

This image represents one of the best modes contemplated by the inventor of carrying out her invention.

This particular mode is the automatic identification, extraction, and regeneration of digital content, such as images, across advanced networks and within complex digital collections by using the processes and techniques disclosed. The use of non-text based descriptions for search/retrieval and data conversion/generation is the heart of the subject matter which the applicant regards as her invention.

The "hub" or "node" that digital matter, such as images, are able to become over advanced scale-free networks is made possible by the mathematical and perceptual processes disclosed throughout the specification. New types of linkages and records will be automatically generated through use of the invention. For example, the same image can be perceived by different people different ways, the invention is a process for these perceptions to be recorded and mathematically measured by machines. Over time, the system disclosed will streamline non-quantifiable perceptual patterns with quantifiable mathematical patterns to organize, interpret, and archive complex shared dynamic digital collections a

new way. The processes of using the invention will also help us and future generations to map and understand advanced networks a new way.

Therefore, an image - rather than text, numbers, symbols or other annotations, writing, descriptive narrative, or an abstract idea - is required at this place within the specification to clearly convey this subject matter.



The image selected to illustrate this point is the painting "Delaware Gap" by Franz Kline shown above. It is placed in:

G. Detailed Disclosure and Specific Embodiments of the Invention

Section 3. Symbolic Characters and their Function

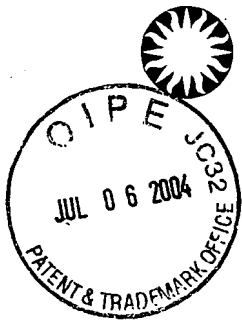
Paragraph 3.14, page 33 (formerly page 47, see 1 of 7 Copy of the Notice)

The following instructions are a placeholder in the attached substitute specification:

< INSERT IMAGE "DELAWARE GAP" BY FRANZ KLINE
BLACK AND WHITE PHOTOGRAPH IN (4 of 7)
MINIMUM IMAGE SIZE 2.75 INCHES WIDE IF POSSIBLE >

This exact image is required for paragraphs 2.3 (on page 25) to 3.14 (on page 34), and references in subsequent paragraphs, to reach a concrete conclusion by using this picture as a genuine, realistic example of the Context Driven Topology concept in action.

This particular image has been selected because of this painting's scale versus human size, the fact it is black and white, the actual museum object number and explanation of typical museum object numbering



Smithsonian
Hirshhorn Museum and Sculpture Garden

Modern and Contemporary Art

Deborah MacPherson
Curator
Accuracy & Aesthetics
118 Dogwood Street
Vienna, VA 22180

June 29, 2004

Dear Ms. MacPherson:

It is our understanding that you wish to obtain black and white prints of our work *Delaware Gap* by Franz Kline for reference purposes regarding your patent submission to the USPTO. Written permission is required to reproduce the work. Please contact me if I can be of further assistance in this regard.

Enclosed are your requested materials and an invoice. Best luck with your project.

Sincerely,

Amy Densford
Photography Coordinator

RECEIVED BY DEBORAH
MACPHERSON
DMP

SMITHSONIAN INSTITUTION
Hirshhorn Museum and Sculpture Garden
Independence Avenue at Seventh Street SW
Washington DC 20560
202.357.3273 Telephone
202.357.3151 Fax

State District of Virginia
City/County of Alexandria

The foregoing instrument was acknowledged before me this 1st
day of July, 1992004, by Deborah I. Macpherson
Ronan Castrodale

My commission expires: 8-31-05

Notary Public

 **Title:** Context Driven Topologies

Inventor: Deborah L. MacPherson, Vienna VA

Application Number: 10/803,040

Filed: March 18, 2004

Description: A mathematical and perceptual process to map human knowledge and understanding over time.

References Cited:

Copyright for a non-dramatic literary work Registration number TXu 1-078-059, entitled "Visualization of Improved Mesh Topologies" authored by Deborah L. MacPherson, registered November 6, 2002 at the Library of Congress by Marybeth Peters, Registrar of Copyrights, United States of America.

MacPherson, D (2004) Collecting Patterns that Work for Everything International Journal of Dynamical Systems Research, Chaos & Complexity Letters, Metaphors

MacPherson, D (2004) Perceiving Design in Virtual Spaces International Association of Mathematics and Design (Res. I.G.J. Nr. 000104)

A1. Abstract

B1. Field of the Invention / B2. Background of the Invention / B3. Prior Art

C. Future Plans for the Invention / General Notes

D. Brief Summary of the Invention

E. Drawings, Figures 1-10

F1. Brief Drawing Descriptions / F2. Detailed Drawing Descriptions

G. Detailed Disclosure and Specific Embodiments of the Invention

Sections

1. Context Driven Topology
2. Concept Boundaries and the Annotation Process
3. Symbolic Characters and their Function
4. Evolving Mathematical Knowledge Patterns Converted into Multidimensional Wave Forms
5. Metaphors
6. Monitoring, Controlling, and Influencing Information Placement and Proximity over Time
7. Use of the Automatic Evolving Audio and Visual Language and Display Patterns
8. Shared Memory
9. Data Curation and Digital Preservation
10. Specific Embodiments and Applications

H. Claims 1-10

References to the Drawings are indicated by a [Fig. number in square brackets]

References to related Sections and Paragraphs are indicated by (number in curved brackets)